B V H Consulting Engineers
Survey and Engineering Project Consultants

Ref no: BVH/ BBMP/ /2019-20 Date: 7/12/18

To,
THE EXECUTIVE ENGINEER
Byatarayanapura Division,
No. 2152/20, Defence Colony,
Sahakara Nagara, Bengaluru- 92

Respected Sir,

Sub: - Submission of PMC letter for 4th and part bill of the work PACKAGE 2 IMPROVEMENTS TO ROADS AND DRAINS CONSTRUCTION OF RO WATER PLANT BANGALURU ONE CENTER IN WARD NO. 7 AND 8 BYATARAYANAPURA DIVISION AS PER ANNEXURE GP NO UDD 217 SFC 2016 DATED 28.05.2016 WORKS SL.NO. FOR WARD NO.7, 12 TO 23 WARD NO. 8 24 TO 32.

Agency Name: Benaka Developers and projects Pvt. Ltd

With reference to the above, I write to submit the letter for the work cited under subject reference. The work is executed satisfactorily as per norms and supervised by our technical staff, in presence and guidance of departmental engineer in charge and the work was found completed satisfactorily up to 4th and part Bill amounting Rs. 9818283.82

Thanking You,

B.V.H CONSULTING ENGINEERS Bangalore

Yours faithfully

B.V.H Consulting Engineers
(Proprietor)

#42/1, 6th Main Road, Jnanajyothi Nagara, Malathalli, Bangalore – 560 056.Tel: 080-23241948, Fax: 080 - 23240685, Cell : 9964339888 E-mail : mbnk2278@yahoo.com

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Survey and Engineering Project Consultants

Ref no: BVH/ BBMP/ /2019-20 Date :7/ 12/ 18

To,

THE EXECUTIVE ENGINEER
Byatarayanapura Division,
No. 2152/20, Defence Colony,
Sahakara Nagara, Bengaluru- 92

Respected Sir,

Sub: Submission of Reports of "PACKAGE 2 IMPROVEMENTS TO ROADS AND DRAINS CONSTRUCTION OF RO WATER PLANT BANGALURU ONE CENTER IN WARD NO. 7 AND 8 BYATARAYANAPURA DIVISION AS PER ANNEXURE GP NO UDD 217 SFC 2016 DATED 28.05.2016 WORKS SL.NO. FOR WARD NO.7, 12 TO 23 WARD NO. 8 24 TO 32.".

Ref : BBMP/EE/BTP/AG/55/007/16/000043/2016-17 Dated : 18/01/2018

With reference to the above subject, we are submitting here with Measurement reports, Test reports & Photos of " PACKAGE 2 IMPROVEMENTS TO ROADS AND DRAINS CONSTRUCTION OF RO WATER PLANT BANGALURU ONE CENTER IN WARD NO. 7 AND 8 BYATARAYANAPURA DIVISION AS PER ANNEXURE GP NO UDD 217 SFC 2016 DATED 28.05.2016 WORKS SL.NO. FOR WARD NO.7, 12 TO 23 WARD NO. 8 24 TO 32." for 4th & Part Bill.

Thanking You,

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Bruhat Bangalore Mahanagara Palike
BYTARAYANAPURA DIVISION
Job No: 007-16-000043 26618
Name of Agency :- Benaka Developers and projects Pvt. Ltd
Bill No :- 4th and Part Bill

BOQ Sl No	Description of the Item	Comments/Observation
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)	Work done up to the billed quantity and quantity is satisfactory
2	Removing & Refixing Stone slabs of drains and Pointing in C.M(1:3) (P.No.25, I.No.5.33 of PW, P&IWTD SR 2016-17)	Work done up to the billed quantity and quantity is satisfactory
3	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortor (1:6) including fixing curing etc,. Complete. 10cms thick (P.No.25, I.No.5.31.2 of PW, P&IWTD SR 2016-17)	Work done up to the billed quantity and quantity is satisfactory
4	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortor (1:6) including fixing curing etc,. Complete. 7.5cms thick (P.No.25, I.No.5.31.1 of PW, P&IWTD SR 2016-17)	Work done up to the billed quantity and quantity is satisfactory
5	KSRRBM200-13.1.Dismantling of existing structures like culverts,Bridges,retaining walls and other structure comprising of masonry,cement concrete,wood work,steel work,including T&P and scaffolding where ever necessary,sorting the dismantled material,disposal of unserviceble material and stacking the serviceble material with all lifts complete as per specifications. II.Bymechanicalmeans,A.CementconcreteGradeM-15&M-20(P.No.137,I.No.18.20ofPW,P&IWTD SR 2016-17)	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
7	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)	Work done up to the billed quantity and quantity is satisfactory
8	KSRB 5-14: providing and constructing load bearing wall with solid concrete blocks having block density not less than 1800 kg/m3 of size solid block 400x150x200mm having a minimum average compressive strength of 4.00 N/mm2 confirming to IS 2185(Part 1):2005 and constructed with CM 1:4 as per IS 2572:2005 including cost of all materials labour charges, scaffolding, curing, hire charges of machineries etc., complete as per specifications. KBS No. 5.4 (P.No.24, I.No.5.26.2 of PW, P&IWTD SR 2016-17)	Work done up to the billed quantity and quantity is satisfactory
10	KSRB 5.2-3: Providing and constructing granite size stone masonry in foundation cement mortor 1:6, stone hammered dressed in courses not less than 20cms high, bond stones at 2m. apart in each course including cost of materaials, labour, curing complete as per specifications. Specifcation No. KBS 5.1.13. (P.No.23, I.No.5.6 of PW, P&IWTD S.R 2015-16)	Work done up to the billed quantity and quantity is satisfactory
11	KSRB 15.1.1 Providing flush pointing to square rubble, course or uncoursed stone masonry with cement mortar 1:3, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications. (P.No.112, I.No.15.1 of PW, P&IWTD S.R 2015-16	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
12	KSRB 4-1.6: Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.6 of PW,P&IWTD S.R 2015-16)	Work done up to the billed quantity and quantity is satisfactory
14	Providing and fixing RCC Precast cover slab of 250mm thick for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)	Work done up to the billed quantity and quantity is satisfactory
17	KSRRB M300-14. **Excavation for roadwork in soil with hydraulic excavator** of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location and complete as per specifications. MORTH Specification No.301 (P.No.148, I.No.19.14 of PW,P&IWTD S.R 2016-17)	Work done up to the billed quantity and quantity is satisfactory
19	KSRRB M400-6.2: Construction of granular sub-base by providing Close graded material,mixing in a mechanical mix plant at OMC,carriage of mixed material to worksite,spreading in uniformlayers with mortar grader on prepared surface and compacting with vibratory roller to achieve the desired density,complete as per specifications.A Plant Mix method For Grading II Material (P.No.155, I.No.20.4.2 of PW,P&IWTD SR 2016-17)	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
20	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to **wet mix macadam** specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)	Work done up to the billed quantity and quantity is satisfactory
22	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
21	KSRRB M 500-6, Providing and applying **primer coat** with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)	Work done up to the billed quantity and quantity is satisfactory
23	KSRRB M500-7 : Providing and applying **tack coat** using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
24	KSRRB M500-16. Providing and laying **dense bituminous macadam** 50-75mm compacted thickness with 4.5% **VG-30 Bitumen** using 40/60 TPH capacity H.M.P, using crushed aggregates of grading II, premixed with VG 30 grade bituminous binder and transporting the hot mix to work site, laying with mechanical paver to the required grade level and alignment rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10, complete in all respects complete as per specification MORTH specification No. 507 (P.No.162 I.No. 21.17.6 of PW,P&IWTD S.R 2016-17)	Work done up to the billed quantity and quantity is satisfactory
25	KSRRB M500-19. Providing and laying **bituminous concrete** 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)	Work done up to the billed quantity and quantity is satisfactory
30	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
26	**Cement concrete pavement.**Construction of un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base with OPC cement or any other type as per clause 1051.2.2 design mix M20/M30 , with 25mm and down size graded granite metal coarse aggregates and fine aggregtes , with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 , mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints including groove cutting charges, joint filler, separation membrane, selant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per specifications. - M30 (at 360Kg per cum coarse aggregate @ 0.69cum and fine aggregate @ 0.46cum) ((P.No.177, I.No.22.6.1 of PW,P&IWTD SR 2016-17)	Work done up to the billed quantity and quantity is satisfactory
27	Vaccum de-watering with vaccum pump and suction mat and compaction with skin floater clubbed with floating disc including cost of generator, HOM of machinery, Screed Vibratory, Power Floater, blade and disc etc., with all lead and lift.(P.No.177, I.No.22.7 of PW, P&IWTD SR 2016-17)	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
31	Geophysical investigation of site for sinking Borewell for supplying drinking water to the habitation either through the Handpump, MWS of P.W.S.S by vertical electrical sounding by adopting Venner or Schlumberger's method, including reconnaissance survey of geological formation, Gerophysical investigation of existing Ground Wate in the vicinity, its quality f 1.0 meter in consolidated formation for proper seating of casing pipe, depth of drilling required to cover full depth of aquifer proposed to be tapped, probable yield and other information required including transportation of instrument and accessories to work site., engaging techinical personal and labour required etc., as per Specification and direction of the engineer-in-charge of the work (P.48, I. 9.4) PRED.SR 2012-13	Work done up to the billed quantity and quantity is satisfactory
32	Sinking borewell of 165mm dia clear using superfast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with aminimum working of compressor for one hour (excluding coat of casing pipes, collars, cap etc.,) P. 46 / I. 9.1 PRED SR 2012-13 - 0 to 50m	Work done up to the billed quantity and quantity is satisfactory
33	Sinking borewell of 165mm dia clear using superfast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with aminimum working of compressor for one hour (excluding coat of casing pipes, collars, cap etc.,) P. 46 / I. 9.1 PRED SR 2012-13 - 50 to 100m	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
34	Sinking borewell of 165mm dia clear using superfast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with aminimum working of compressor for one hour (excluding coat of casing pipes, collars, cap etc.,) P. 46 / I. 9.1 PRED SR 2012-13 - 100 to 150m	Work done up to the billed quantity and quantity is satisfactory
35	Sinking borewell of 165mm dia clear using superfast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with aminimum working of compressor for one hour (excluding coat of casing pipes, collars, cap etc.,) P. 46 / I. 9.1 PRED SR 2012-13 - 150 to 200m	Work done up to the billed quantity and quantity is satisfactory
36	Sinking borewell of 165mm dia clear using superfast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with aminimum working of compressor for one hour (excluding coat of casing pipes, collars, cap etc.,) P. 46 / I. 9.1 PRED SR 2012-13 - 200 to 250m	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
37	Supply of ISI mark 175 mm nominal bore, Plain end steel casing pipe-grade of Steel Fee 410 of wall thickness 5.4 mm thick confirming to IS 4270:2001 and latest amendments, electric resistance welded steel tube material and confirming to IS 1387/1993 and manufactured by baseic open hearth electric or basic oxygen process in random length of 5 to 7mts both ends threaded confirming to IS 554/1985, one end fixied with socket confirming to IS 4270:2001 and the other end with screwed pipes ISI Marking weighing 25.10Kg/mtr (Inclusiveofalltaxesanddurties) Prices include Collar-medium duty P.iii,INo. 84 PRED SR 2012-13	Work done up to the billed quantity and quantity is satisfactory
38	Providing 250mm dia PVC Pipe 6kg/cm SE PRED Approved Rate	Work done up to the billed quantity and quantity is satisfactory
39	Providing and fixing160mm Borewell Cap P. iii, I No. 85	Work done up to the billed quantity and quantity is satisfactory
40	Supply and delivery at site brand New texmo/ innoval/ Lubi/ Sabar/ Atalanta/ Calamal/ make suitable for vertical installation in 150 mm dia borewell comprising of single stage or multi stage CF pump close coupled by means of stainless steel coupling to suitable HP suitable speed totally enclosed and filled with pure drinking water (Wet type) squirrel cage submersible induction motor suitable for opertation of 3PH., 50Hz, 380/440 volts AC supply fitted with required accessories such as suction, casing suction strainers sand guard Non return value etc. complete.The pump and motor shall for an integral unit with all the required fittings 12.50 HP 25 stage. ATALANTA< SUGNA< CRI, KIRLOSKAR and other Equivalent Pumps PWD SR 2016-17 P. XXXXII Item No. 24 including of all taxes- 12.5 HP 25 Stage	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
41	Supplying of ISI marked galvanized mild steel tube (continously welded electric resistance welded (ERW) high frequency, induction welded (HFIW) Hot finished welded type of nominal bore given below screwed at both ends as per IS 554/1986 with latest amendments, pipes threaftes at one end and the other end protected as per specification in random lengths of 4 to 7mtrs Confirming to IS 1239 part I /1990 with amendament 1-5 and with all its latest amendements if any.The pipes supplied should be with BIS mark No 3/08-09 2406/15.10.2008	Work done up to the billed quantity and quantity is satisfactory
42	Heavy Duty Collar 50 mm dia	Work done up to the billed quantity and quantity is satisfactory
43	Supplying and drawing 3 core flat PVC sheathed submersible pump cable manufactured with electrolytic grade copper with flexible copper with low resitance conductor confirming to table 3 class 5 of IS:8130-1984 and virgin grade PVC insulation and powder coating extruded PVC sheathed suitable for working voltage upto1100Volts as per IS-694:1990 & confirming to GTP of GROUP-A. P. No. 12 / I No. 2. 10.4(1) 3C x 6 Sqm mm KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
44	Erection of pumpset including aligning and balancing with all necessary erection materials and labour including supply and erection of one pair supprting clamps, one borewell cap. Cable clips with bolts, nuts, valves guages etc., involoved in the job (Necessary GI pipe and specials with be supplied by the board at the site free of cost) (As per rate approved KUWS & DB for year 2008-09	Work done up to the billed quantity and quantity is satisfactory
45	Supplying and fixing 20"x20"x2.5" polished wood board made of not less than 15 mm thick plank on both sides with planks made out of not more than 2 pieces and fixing the same to the wall using tapered inverted wooden plugs screws etc., P No. 44 / I No. 6.6.6 KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
46	Supplying of 1.1 KV LT UG cable having aluminum conductor PVC insulated, extruded inner sheathed, galvanized, steelstrip (except 2CX10Sq.mm wire armoured) confirming to IS-3975:1990 (No.of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1988 & confirming to GTP of GROUP- AP No. 55 / I No.7.4.44 core 16 Sq mm KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
47	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / onwall / on pole as required. In existing trench / duct.P No. 61 / I No.7.8.16 Sq mm to16 Sq mm) KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
48	Digging of trench of 0.6 m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete. (As per Civil SR KSRB I-2,P-7) PNo.61/I.No.7.9.3 KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
49	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than 3.25 mm on pole / wall / drain crossing with necessary clamping arrangements for UG cable of 1.1 KVP.No.62 / I No. 7.12.1 KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
50	Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen / insulating compound complete with terminals, clamps, bolts, nuts and washers etc., P.No.62 / I.No.7.13.2 KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
51	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cut outs and other equipment's on the meter board using 40 mm dia 2.90 mm thick GI pipe 2.5mtr long buried in a pit...The pit should be filled with equal proportion of salt and charcoal 150 mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12 mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 122 mm dia, (P No. 55, I No. 7.1) KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
52	Supplying & fixing of Porcelain fuse channel with cutout on existing wooden / panel using necessary nuts, bolt sand washers. P No. 44 / I No. 6.7.2 KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
53	KSRB 13-7.1-4: Providing and fixing in position 50 mm nominal bore gun metal non-return valve horizontal type of approved make including cost of all materials, labour and HOM of equipments with all leads complete as per specifications NO KBS 13.2.16 / 13.13 Page No. 93 Item No.13.55 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
54	Providing NP/CP waste unions conforming to ISI specifications and fixing them in position as per directions including cost of materials, fixtures and conveyance to works pot etc., complete. P.No. 95 / I. No. 13.81.3 PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
55	Supplying and fixing 50 mm dia GI X nipple with ISI mark with all lead and lift load in gun loading and labour charges etc complete	Work done up to the billed quantity and quantity is satisfactory
56	Supplying shunt capaitors conforming to IS 2834, 3 phase 400/440volts grade for power factor improvement of rotating machinery, Capacitor in KVAR rating Nos.2 KVAR capacity with all lead and lift =, loading, unloading and labour charges etc complete as per specifications	Work done up to the billed quantity and quantity is satisfactory
57	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve,indicator ON/OFF, energycross-3 with Short circuit breaking capacity of 10 K and complete wiring as required confirming to IEC 60898.5-32Amps TPNP No. 47 / I No.6.16.5 KPWD SR 2014-15	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
58	Fabricating supplying and mounting MS box made out…SWG suitable for floor/wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 2 coats of redoxide primer paint and finally finishd with approved colour enameled metal paint etc., complete P.No. 49, I.No.6.40.2 KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
59	Supplying and delivery at site brand newstar / Essen / Lotus / Sun-shines / Adarsh / GK Controls best indigenous make combined energy meter-cum-control panel board unit of size 600x450x200 mmminimum mechanically strong vermin and waterproof. The unit shall have two detachable doors suitable for operation on 3ph, 50Hz, 380/440volts, A.C supply with spring loaded latch, locking device with akey ribs should be provided inside the door, canopy apron and louvers ventilators shall be provided. the combined energy meter cum-control panel board unit suitable for operation. The panel board shall be fabricated on single unit in the above components for suitable pumpset. 12.5 HP to 15 HP Star Delta Starter SERDED Rate	Work done up to the billed quantity and quantity is satisfactory
60	Earthwork excavation for pipeline trenches including deporiting or bank upto a lead of 50 mtrs including shiriry and statting danger lighting and using site rails and boming poles at every 100 mtrs wherever necessary as directed in the following structure manhole. Page No.01 / Item No.1.2.2 / PRED SR 2012-13 Hard Soil	Work done up to the billed quantity and quantity is satisfactory
61	Providing and instalation at site of works P.V.C. Pipes including cost of pipes and specials and incluidng lowring into trenches, laying true to line, level and perfect linking at joints, leak proof including jointing encasing the pipe alround to a depth Not less than 15cm with grave or selected earth avalabile from the execavation Etc., Page No.15 item No.3.4.2 b PRED SR 2012-13.	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
62	Refilling the basement and pipeline treanches with secleted available earth for trench excavation including authority condition in layers from thdi including disponsary of the surplus earth with a heavy 200mtrs PageNo.3 / Item No.1.6 / PRED SR 2012-13	Work done up to the billed quantity and quantity is satisfactory
63	KSRB 13.6.3-6: Providing and fixing in position brass gate valve with C.I wheel of approved quality (screwed end) 50mm nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specifications. Specification No. KBS13.2.6/13.3P. 92 / I.13.37 PWD SR - 2016-17	Work done up to the billed quantity and quantity is satisfactory
64	KSRB 2-2.2: Earthwork excavation for foundation of buildings, culverts water supply, sanitary line and electrical conduits either in pits or in trenches 1.5 m and above in width, in Hard soil not exceeding 1.5m, in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m, after breaking of clods complete as per specifications, specification, No, KBS 2.1(a) / 2.3.5, Page No.5 / Item No.2.3 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
67	KSRB 4-1.3: Providing and laying in position plain cement concrete of mix 1:4:8 with OPC cement @ 180 kgs with 40 mm and down size graded granite metal coarse aggregates @ 0.85cum and fine aggregares @0.57 cum machine mixed, concrete laid in layers not, exceeding 15 cms, thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications.Specification No.KBS 4.1, 4.2. No.12 / I tem No.4.3 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
68	KSRB 5.2.3: Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6, stone hammerd dressed in courses not less than 20cms high, bond stones at two m.apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13 Page No.23 / Item No.5.6 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
69	KSRB 5.3-3: Providing and constructing granite / trap / basalt size stone masonry in basement with cement mortar 1:6, edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5-1.13 Page No.23 / Item No. 5.9 / PWD SR 2015-16	Work done up to the billed quantity and quantity is satisfactory
70	KSRB 2.3: Filling available excavated earth (excludingrock) insides of foundations upto plinth in layers not exceeding 20cms. in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5m. including cost of all labour complete as per specifications.Specification No.KBS 2.9(P.6/I.2.10) PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
71	KSRB 5-11: Providing and constructing load bearing wall with solid concrete blocks of size 400x200x200 mm having block density not less than 1800kg/m3 and having aminimum average compressive strength 5.00N/mm2 confirming to IS 2185 (Part): 2005 and constructed with CM 1:4, as per IS 2572:2005 including cost of all materials, labour charges, scaffolding, curing complete as per specifications.KBS No.5.4.Page No.25 / I tem No.5.27 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
72	KSRB 4.2.2: Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320kgs, with 20mm and down size graded granite metal, coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum with superplastisiser @ 3lts confirming to IS 9103-1999 reaffirmed-2008 machine mixed, concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation plinth and ground floor level for roofslabs, staircase, lintels, retaining walls, walls (any thickness) including attached plasters, column, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc, including cost of all materials, labour, HOM of machinery, curing, complete as per specifications.Specification No.KBS 4.1,4.6,No.13 / Item No.4.11 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
74	KSRB 4.2.10: Providing and laying in position reinforced cement concrete of mix M20 with OPC cement @ 24kgs, with 12mm and down size graded granite metal coarse aggregates @ 0.5175 cum and fine aggregates @ 0.345 cum with superplastisiser @ 0.225lts, machine mixed, well compacted for plain chajja of 7.5cms.average thickness,upto ground floor lever, including cost of all materials, labour, HOM of machinery, curing, complete as per specification. Specification NO. KBS 4.1,4.6 Page No.14 / Item No.4.19 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory

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BOQ	Description of the Item	Comments/Observation

Sl No		
75	KSRB 4.9.1: Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to thead joining members wherever necessary complete as per design (laps, hook sand wastage shall not be measured and paid) cost pf materials, labour, HOM of machinery complete as per specifications.Specification No.KBS 4.6.3 Page No.17 / Item No.4.46.2 / PWD SR 2016-17 - FE 500	Work done up to the billed quantity and quantity is satisfactory
77	KSRB 4-6.4: Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached plasters, buttresses, plinth and string courses cost of all materials, labour complete as per specifications. Specification NO KBS 4.6.2 Page No.15 / Item No. 4.31 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
81	KSRB 4-6.10: Providing and removing centering, shuttering, strutting, propping etc., for chajjas, corbels etc., including edges including cost of all materials, labour complete as per specifications.Specification NO KBS 4.6.2 Page No.16 / Item No. 4.37 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
82	KSRB 15.3.13: Providing 12mm thick cement plastering single coat with cement mortar 1:3, to ceiling including rounding off corners where ever required smooth rendering,: Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.Page No.114 / Item No.15.21 / PWDSR-2016-17	Work done up to the billed quantity and quantity is satisfactory

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BOQ	Description of the Item	Comments/Observation

Sl No		
83	KSRB15.3.11: Providing 20mm thick cement plastering single coat with cement mortar 1:4, to stone masonry including rounding off corners where ever required smooth rendering,: Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. Page No.114 / Item No.15.19 / PWD SR 2016-17 (Inside wall)	Work done up to the billed quantity and quantity is satisfactory
88	KSRB15-7: Providing lime rendering for plastering to wall and ceiling, including cost of materials, labour, curing complete as per specifications. (P.115/I.15.33 PWD SR-2016-17).	Work done up to the billed quantity and quantity is satisfactory
89	KSRB15.3.9: Providing 18mm thick cement plastering single coat with cement mortar 1:6, to brick masonry including rounding off corners where ever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications Page No.114 / Item No.15.17 / PWD SR 2016-17 (Out side Wall)	Work done up to the billed quantity and quantity is satisfactory
90	KSRB15-14.1: Providing and applying two coats with oilbound washable distemper of approved brand and shade on wall surface including priming coat with distemper pimer after thoroughly brooming the surface free from mortar drops and other foregin matter including preparing the surface even and sandpaper smooth cost of materials, labours, complete as per specifications PWD SR 2016-17 (P.117 / I. 15.49.1	Work done up to the billed quantity and quantity is satisfactory
91	KSRB15-16.1: Providing and finishing external walls in two coats with water proof cement paint of approve brand and shade to give an even shade after thourghly brooming the surface to remove all dirt and losse powdered material, free from mortar dops and other foreign matter cost of materials, labours, complete as per specifications PWD SR 2016-17 (P. 118 / I. 15.53.2) with Primer	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
102	KSRB15-18.2: Providing and applying enamel metal paint two coats (excluding priming coat) over new steel or other metal surface brushing to give an even shade after cleaning oil, grease, dirt and other foreign matter, including cost of materials, labour, complete as per specifications. Page No. 121 / Item No. 15.74 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
103	Providing and fixing Special make glazed Vitrified tiles (Granomite finis) of approved make, quality and colour of sized 6000x600x10 mm thick fixed on existing flooring with a special roffe adhesive for flooring and skirting etc., complete including providing spears at required interval and removing stains etc., complete.Page No.107 / Item No.14.43 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
104	Providing and laying / fixing cement base, precast pre polished cement concrete, designer tiles 25mm thick conforming to IS 1237 heavy duty tiles for flooring reads of steps of steps and landin, laid on a bed of 12mm thick cement mortar 1:3 misfinished with flush pointing using white cement, including cost of materials including cutting, griding the edge ti half/full round where ever requires labour, curing complete as per specification Page No. 109 / Item No. 14.62 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
105	KSRB7.7: Providing and fixing in position in cement concrete 1:3:6 steel glazed windows and ventilators side hung / to phung fully open able as per approved drawings using Zangles of 25x33x3mm, weighing 1.419Kg/m both for outer and inner frames and central mullion section of size 25x46x3mm weighing 2.28Kg/m duly providing T section 19x19x3mm weighing 0.839kg/m for glazing of windows not more than 34cms.ctoc including providing and fixing 4mm thick reeded glass with teak wood beading of required size, all steel section should confirm to I.S.7452:1990 ,4nos, of hold fasts of approved size section should be cut to length welded and electrically grinded sub dividing frames of unit shall betenonned and revette into the frames electrically. All the steel surface shall be thoroughly cleaned free of rustand painted with one coat of anti-corosive paint and finishing with two coats of ready mix paint of approved colour and make including cost of materials, fixtures, labour and HOM of machinery complete as per specification	Work done up to the billed quantity and quantity is satisfactory
106	KSRB :7.5 Providing and fixing pull and push type rolling shutters of approved make out of 18 guage, 75mm wide cold rolled steel lths of convex corrugation, with side guides and bottom rail, with inter locking arrangements for steel laths by means of alternate clips, suspension shaft with High tension coil type springs two numbers, mounted on specially designed pipe shaft, with bracket plates, guide channels, ball bearing arrangements, for inside & outside locking with push & operations complete Including pulling hooks, 4 nos handles with all fittings and accessories, painted with a coat of red lead paint (without top cover) cost of materials, labour, HOM of machinery complete as per specifications. Shutter size 3mx2.8m Specification NO.KBS7.10/7.12 Page No.31 / Item No.7.5 / PWD SR 2015-16	Work done up to the billed quantity and quantity is satisfactory

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